

WORKSHEET FOR THRESHOLD LIMIT EQUATION AT MAXIMUM ALLOWABLE WATER / CEMENTITIOUS RATIO

CMD Target Cementitious Content (C+P+SF): _____ lbs
 Maximum Allowable Water Content: _____ x 0.420 = _____ lbs

Material	Theoretical Batch Weights & Volumes, w/o air		
	Weight lbs	Specific Gravity	Volume ft ³
Cement		3.150	
Pozzolan			
Silica Fume			
FA			
CA			
Water		1.000	
Air Content		NA	0.00
Σ		NA	

Definition:

Point 3, having coordinates (x₃, y₃) is selected to represent a concrete mixture which has excessive batch water resulting in theoretical air content and unit weight as follows:

x₃= 0.0 % Air Content

y₃= ΣTheoretical Batch Weights ÷ ΣTheoretical Batch Volumes

y₃= _____ lbs. ÷ _____ ft³

y₃= _____ lbs./ft³ (rounded to first decimal place)

Solution:

Slope remains unchanged from CMD Linear Equation, m= _____
 y-intercept for Threshold Limit Equation = y₃ = _____ lbs/ft³

Threshold Limit Equation at Maximum Water Cementitious Ratio:

Predicted Threshold Unit Weight = m (Air) + y₃

Predicted Threshold Unit Weight = _____ (Air) + _____